

Student Evidence and Teacher Actions for Mathematical Practice 1

| | Student Evidence of Learning the Practice | Teacher Actions to Engage Students |
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| Make sense of problems and persevere in solving them. | <p>Students:</p> <ul style="list-style-type: none"> • Make a plan to solve a task prior to starting the solution pathway • Articulate how the task given is similar and different from previous tasks • Identify the critical information in the task they need to solve the problem • Make changes in the solution pathway as needed to end with a reasonable answer • Determine more than one strategy to use to solve a task • Estimate an answer prior to solving the task • Evaluate the reasonableness of the solution | <p>Teachers:</p> <ul style="list-style-type: none"> • Model and connect different strategies that students can use to solve tasks • Ask questions and provide manipulatives that allow for students to productively struggle without lowering the cognitive demand of the task (see Assessing Questions in the sample lesson plan in figure 1.17, pages 36–38) • Have students share solution strategies and make connections • Provide nonroutine, quality tasks for students to make sense of • Encourage students to estimate a solution prior to starting the task • Model different ways to check the reasonableness of an answer • Introduce and connect strategies used in class with those used in other grade levels • Provide opportunities to deepen understanding of students as needed (see Advancing Questions in the sample lesson plan in figure 1.17, pages 36–38) |